

Manningham Community Nursery Schools Federation



Mathematics Policy

Rationale

“Research on children’s learning in the first six years of life demonstrates the importance of early experiences in mathematics. An engaging and encouraging climate for children’s early encounters with mathematics develops their confidence in their ability to understand and use mathematics. These positive experiences help children to develop dispositions such as curiosity, imagination, flexibility, inventiveness, and persistence, which contribute to their future success in and out of school”

Clements & Conference Working Group

“We can influence children’s keenness to learn mathematics by making the tasks they do of interest to them... by showing that we really think maths is important and fun and that it is therefore good to be a person who likes mathematics

” Mathematics in the Early Years, Clemson and Clemson 1994 London, Routledge

Mathematics is a highly inter-connected discipline critical to science, technology and engineering and necessary for financial literacy and most forms of employment. Developing a good understanding of mathematical concepts is therefore essential in enabling children to participate successfully in society and in understanding their world. A high quality mathematics education will support children in their ability to do this and by making mathematics enjoyable by using every day concepts, such as counting steps, or numbers of knives and forks needed for laying the table.

Children begin to explore mathematical concepts through their play from an early age. This playful approach should continue in nursery. It ensures their developing knowledge and understanding is grounded in concrete experiences, which are important building blocks for future learning.

To provide effectively for the needs of all our children we will use the ‘Statutory Framework for The Early Years Foundation Stage’ to inform our practice.

Children develop and learn in different ways at different times and this will be at the heart of our day to day practice. We recognise the individuality of all children and the need to nurture their confidence, capabilities and independence, to this end we will ensure that our practice reflects the characteristics of effective teaching and learning, playing and exploring, active learning and creating and thinking critically.

At all times we will develop children’s ability to self-regulate, so that they can engage meaningfully in mathematical activities.

Aims

Our aims set out how we intend to deliver a high quality curriculum

- To develop children's self-regulation and metacognition skills in order to increase children's capacity for mathematical thinking
- To enable children to master mathematical concepts and skills by providing rich mathematical experiences, supported by intuitive and responsive adults
- To provide a cross-curricular and whole school approach to the teaching of maths, which is grounded in knowledge and understanding of the subject matter and the most effective ways of teaching and learning
- To provide a mathematically rich environment indoors and outdoors in which children can experience mathematical ideas in a purposeful way.
- To use the environment to support and develop mathematical learning through continuous provision and enhanced provision that is rich and varied and responds to spontaneous play and children's interests
- To plan experiences with a mathematical focus
- To dedicate time each day for mathematical learning
- To make the most of moments throughout the day to highlight and use mathematics, for example, in daily routines, play activities, and other curriculum areas
- To seize chances to reinforce **mathematical vocabulary**.
- To create opportunities for extended discussion of mathematical ideas with children.
- To support children's learning with high quality adult interaction
- To use manipulatives and representation to enhance children's understanding of mathematical concepts
- To work in partnership with parents by sharing information regarding Mathematical development and their child's learning.
- To have a particular focus on the aspects of mathematical development in our planning and assessment
 - Number
 - Operations
 - Geometry and special thinking - Shape, space and measures
- To ensure that all children are supported in making the best possible progress.

Objectives

Our objectives set out how we implement our aims

- We will develop mathematical understanding through all children's early years' experiences, including through stories, songs, games and imaginative play, puzzles, puppet play, use the natural and made world etc.
- We will use children's interests as they occur and develop these in a mathematical direction when appropriate.
- We will encourage children to develop a positive attitude to mathematics by transmitting enthusiasm and enjoyment in the subject.
- We will plan activities, problems and challenges for groups and individuals.
- We will use experiential activities and visual aids to support mathematical learning
- We will increase staff knowledge about mathematical development through relevant in-service training
- We will ensure that children are making the best progress. Over time, we will assess and track their progress. The results of which will inform future planning both at an individual level and also at a curriculum level.
- We will ensure that children understand the links between the manipulatives and the mathematical ideas they represent.
- We will ensure that there is a clear rationale for using a particular manipulative or representation to teach a specific mathematical concept.
- We will encourage children to represent problems in their own way, for example with drawings and marks.
- We will use manipulatives and representations to encourage discussion about mathematics.
- We will use manipulatives with a low cognitive load to ensure children's focus on mathematical thinking.
- We will encourage children to use their fingers—an important manipulative for children.
- We will carefully listen to children's responses and consider the right questions to ask to reveal understanding. Information collected will be used to inform next steps for teaching.
- We will utilise developmental progressions (EEF) in informing decisions around what a child should learn next.

The following support the **implementation** of this policy and ensure we monitor **impact**

- a. Guidelines on Curriculum Planning
Birth to 3 years / 3-5 years

- b. Communication Strategies with Children

- c. Guidelines for Maths

- d. Assessment Policy and Guidelines